SKILLSHEET 8.4

Reading financial tables

The calculations for many financial problems are quite complex and beyond the scope of this course. In practice, banks and other financial institutions will provide a table of values that will allow a customer to easily calculate the value of an investment.

The table below shows the amount to which $1 will grow under compound interest. On the horizontal are various interest rates and on the vertical is the number of interest periods.

	Interest rate per period									
Periods	**1%**	**2%**	**3%**	**4%**	**5%**	**6%**	**7%**	**8%**	**9%**	**10%**
1	1.010	1.020	1.030	1.040	1.050	1.060	1.070	1.080	1.090	1.100
2	1.020	1.040	1.061	1.082	1.103	1.124	1.145	1.166	1.188	1.210
3	1.030	1.061	1.093	1.125	1.158	1.191	1.225	1.260	1.295	1.331
4	1.041	1.082	1.126	1.170	1.216	1.262	1.311	1.360	1.412	1.464
5	1.051	1.104	1.159	1.217	1.276	1.338	1.403	1.469	1.539	1.611
6	1.062	1.126	1.194	1.265	1.340	1.419	1.501	1.587	1.677	1.772
7	1.072	1.149	1.230	1.316	1.407	1.504	1.606	1.714	1.828	1.949
8	1.083	1.172	1.267	1.369	1.477	1.594	1.718	1.851	1.993	2.144
9	1.094	1.195	1.305	1.423	1.551	1.689	1.838	1.999	2.172	2.358
10	1.105	1.219	1.344	1.480	1.629	1.791	1.967	2.159	2.367	2.594

WORKED EXAMPLE

Use the table above to find the amount to which an investment of $5750 will grow under an investment at 8% p.a. for 3 years with interest compounded semi-annually.

THINK	WRITE
1 Calculate the interest rate per period.	Interest rate $= 8\% \div 2$ $= 4\%$
2 Calculate the number of interest periods.	$n = 3 \times 2$ $= 6$
3 Look up the table for the intersection of 4% and 6 interest periods.	1.265
4 Multiply this number by the amount of the investment.	$A = \$5750 \times 1.265$ $= \$7273.75$

Try these

1 Calculate the amount to which each of the following investments will grow.
   a $10 000 at 7% p.a. for 4 years with interest compounded annually
   b $5680 at 9% p.a. for 10 years with interest compounded annually
   c $20 000 at 8% p.a. for 4 years with interest compounded semi-annually
   d $16 750 at 10% p.a. for 3 years with interest compounded semi-annually
   e $47 000 at 8% p.a. for 2 years with interest compounded quarterly
   f $9400 at 12% p.a. for 2 years with interest compounded quarterly

2 Calculate the amount of compound interest earned on each of the following investments.
   a $95 000 at 10% p.a. for 6 years with interest compounded annually
   b $24 650 at 7% p.a. for 5 years with interest compounded annually
   c $2225 at 10% p.a. for 5 years with interest compounded semi-annually
   d $12 500 at 14% p.a. for 4 years with interest compounded semi-annually
   e $9990 at 8% p.a. for 2 years with interest compounded quarterly
   f $35 800 at 12% p.a. for 2 years with interest compounded quarterly

SKILLSHEET — ANSWERS

SKILLSHEET 8.4

Reading financial tables

1 a $13 110
b $13 444.56
c $27 380
d $22 445
e $55 084
f $11 909.80

2 a $73 340
b $9933.95
c $1399.53
d $8975
e $1718.28
f $9558.60